#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization

International Bureau



# 1 (1888 8 1) (1891 | 1881 | 1884 <del>| 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 |</del>

#### (43) International Publication Date 3 June 2004 (03.06.2004)

PCT

### (10) International Publication Number WO 2004/047320 A1

(51) International Patent Classification7: H04L 12/28, H04B 7/00

H04B 1/04,

(21) International Application Number:

PCT/KR2003/002530

(22) International Filing Date:

21 November 2003 (21.11.2003)

(25) Filing Language:

Korean

(26) Publication Language:

English

(30) Priority Data: 2002-338204

21 November 2002 (21.11.2002)

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(81) Designated States (national): AE, AG, AL, AM, AT, AU,

AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ,

LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,

MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

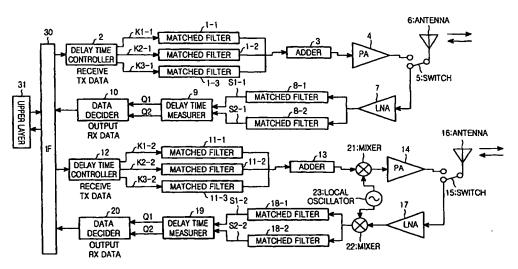
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

#### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ULTRA WIDEBAND RADIO TRANSMITTER, ULTRA WIDEBAND RADIO RECEIVER, AND ULTRA WIDE-BAND RADIO COMMUNICATION METHOD



(57) Abstract: Disclosed are ultra wideband radio transmitter, ultra wideband radio receiver, and ultra wideband radio communication method capable of securing higher transfer rate and communication quality than conventional ones while avoiding a band where communication signals are concentrated, and capable of miniaturizing an antenna. In a transmitter, a delay time controller (12) outputs a periodic pulse to matched filters 11-1 and 11-2 when transmission data is 1, and outputs the periodic pulse to matched filters 11-1 and 11-3 when the transmission data is 0. The matched filter 11-1 outputs reference signal, the matched filter 11-2 outputs first data signal ahead of the reference signal, and the matched filter 11-3 outputs second data signal behind the reference signal. An adder (13) adds up these, a mixer (21) frequency-converts output of the adder using a local signal received from a local oscillator (23), and an antenna (6) radiates output of the mixer (21).

